CLAIMS

1. A polyester resin composition comprising, on a weight basis, 30 ppm or less of antimony, 0.5 to 50 ppm of titanium, and 0.1 to 100 ppm of phosphorus, wherein the number density of titanium-containing particles, the equivalent circular diameter of which is 1 μm or more, is less than 100/0.02 mg.

2. The polyester resin composition according to claim 1, wherein a titanium compound is used as a polymerization catalyst.

3. The polyester resin composition according to claim 1, comprising a titanium oxide.

4. The polyester resin composition according to claim 3, comprising a complex oxide of titanium and silicon.

5. The polyester resin composition according to claim 1, comprising a titanium compound having at least one substituent selected from the group consisting of an alkoxy group, a phenoxy group, an acylate group, an amino group, and a hydroxyl group.

6. The polyester resin composition according to claim 5, wherein the alkoxy group in the titanium compound is at least one functional group selected from the group consisting of a β-diketone-system functional group, a hydroxycarboxylic acid-system functional group, and a ketoester-system functional group.

7. The polyester resin composition according to claim 5, wherein the acylate group in the titanium compound is either a multivalent carboxylic acid-system functional group or a nitrogen-containing multivalent carboxylic acid-system functional group.

8. The polyester resin composition according to claim 5, wherein the titanium compound has an aliphatic alkoxy group or an aliphatic acylate group.

9. The polyester resin composition according to claim 1, comprising at least one phosphorus-based compound selected from the group consisting of a phosphoric acid-based compound, a phosphorous acid-based compound, a phosphonic acid-based compound, a phosphinic acid-based compound, a phosphine oxide-based compound, a phosphonous acid-based compound, a phosphinous acid-based compound, and a phosphine-based compound.

10. The polyester resin composition according to claim 9, comprising phosphoric acid and/or a phosphate compound.

11. The polyester resin composition according to claim 9, comprising a phosphonic acid compound and/or a phosphonate compound.

12. The polyester resin composition according to claim 11, wherein the phosphorus-based compound is ethyl diethylphosphonoacetate.

13. The polyester resin composition according to claim 1,

wherein the molar ratio of titanium to phosphorus (Ti/P) is in the range of 0.1 to 20.

14. The polyester resin composition according to claim 1, further comprising 5 to 100 ppm of an alkaline earth metal element on a weight basis.

15. The polyester resin composition according to claim 14, comprising 15 to 60 ppm of magnesium on a weight basis.

16. The polyester resin composition according to claim 1, wherein the specific volume resistivity is in the range of 1×10^6 to 1×10^9 $\Omega \cdot cm$ when melted.

17. A polyester film comprising the polyester resin composition according to claim 1.

18. A laminated polyester film comprising a plurality of layers at least one of which comprises the polyester resin composition according to claim 1.

19. A magnetic recording medium, comprising the laminated polyester film according to claim 18.

20. A polyester resin composition comprising, on a weight basis, 30 ppm or less of antimony, 0.5 to 50 ppm of titanium, and 0.1 to 100 ppm of phosphorus, wherein organic polymer particles are contained in amount of 0.1 to 5 wt%, the organic polymer particles having an average particle diameter determined by dynamic light scattering of 0.05 to 3 μm and containing 0.01% or less of coarse particles relative to the total number of the particles, the coarse particles

having a diameter at least twice the average particle diameter.

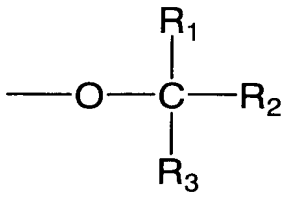
21. The polyester resin composition according to claim 20, wherein a titanium compound is used as a polymerization catalyst.

22. The polyester resin composition according to claim 20, comprising a titanium oxide.

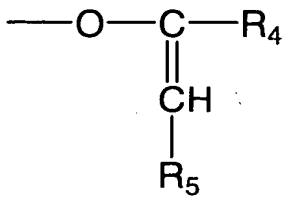
23. The polyester resin composition according to claim 22, comprising a complex oxide of titanium and silicon.

24. The polyester resin composition according to claim 20, comprising a titanium compound having at least one substituent selected from the group consisting of functional groups represented by formulae 1 to 6 below:

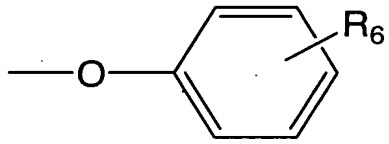
(Formula 1)



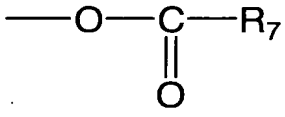
(Formula 2)



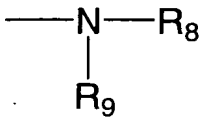
(Formula 3)



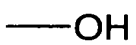
(Formula 4)



(Formula 5)



(Formula 6)



(wherein R_1 to R_9 each represent hydrogen or a C_1-C_{30} hydrocarbon group).

25. The polyester resin composition according to claim 24, wherein at least one of R_1 to R_9 in formulae 1 to 6 is a C_1-C_{30} hydrocarbon group having an alkoxy group, a hydroxyl group, a carbonyl group, an acetyl group, a carboxyl group, an ester group, or an amino group.

26. The polyester resin composition according to claim 25, wherein at least one of R_1 to R_6 in formulae 1 to 3 is a C_1-C_{30} hydrocarbon group having a hydroxyl group, a carbonyl group, an acetyl group, a carboxyl group, or an ester group.

27. The polyester resin composition according to claim 25, wherein at least one of R_1 to R_3 in formula 1 is a C_1-C_{30} hydrocarbon group having a carboxyl group or an ester group.

28. The polyester resin composition according to claim 25, wherein R_7 in formula 4 is a C_1-C_{30} hydrocarbon group.

29. The polyester resin composition according to claim 28, wherein R_7 in formula 4 represents a C_1-C_{30} hydrocarbon group having a hydroxyl group, a carbonyl group, an acetyl group, a carboxyl group, or an ester group.

30. The polyester resin composition according to claim 20,

comprising at least one phosphorus-based compound selected from the group consisting of a phosphoric acid-based compound, a phosphorous acid-based compound, a phosphonic acid-based compound, a phosphinic acid-based compound, a phosphine oxide-based compound, a phosphonous acid-based compound, a phosphinous acid-based compound, and a phosphine-based compound.

31. The polyester resin composition according to claim 30, comprising phosphoric acid and/or a phosphate compound.

32. The polyester resin composition according to claim 30, comprising a phosphonic acid compound and/or a phosphonate compound.

33. The polyester resin composition according to claim 32, wherein the phosphorus-based compound is ethyl diethylphosphonoacetate.

34. The polyester resin composition according to claim 20, wherein the molar ratio of titanium to phosphorus (Ti/P) is in the range of 0.1 to 20.

35. The polyester resin composition according to claim 20, further comprising 5 to 100 ppm of an alkaline earth metal element on a weight basis.

36. The polyester resin composition according to claim 35, comprising 15 to 60 ppm of magnesium on a weight basis.

37. The polyester resin composition according to claim 20, wherein the organic polymer particles have a degree of

cross-linking of at least 50%.

38. The polyester resin composition according to claim 20, wherein the organic polymer particles are a vinylbenzene-divinylbenzene copolymer.

39. The polyester resin composition according to claim 20, wherein 0.1 to 5 wt% of a water-soluble polymer relative to the organic polymer particles is contained.

40. The polyester resin composition according to claim 39, wherein the water-soluble polymer has a pyrrolidone residue.

41. The polyester resin composition according to claim 20, wherein the specific volume resistivity is in the range of 1×10^6 to 1×10^9 $\Omega \cdot cm$ when melted.

42. A polyester film comprising the polyester resin composition according to claim 20.

43. A laminated polyester film comprising a plurality of layers at least one of which comprises the polyester resin composition according to claim 20.

44. A magnetic recording medium, comprising the laminated polyester film according to claim 43.

45. A catalyst for producing polyesters, comprising a reaction product between at least one compound selected from the group consisting of the compounds represented by general formulae 7 and 8 below and a ligand comprising at least one type of atom selected from the group consisting of a nitrogen atom, a sulfur atom, and an oxygen atom as the

donor atom, and being capable of coordinating with two or more sites:

$Ti(OR)_4$ (Formula 7)

$Ti(OH)_m(OR)_{4-m}$ (Formula 8)

(wherein Rs may be the same or different and each represent C_2-C_{10} organic group, and m represents an integer of 1 to 4).

46. The catalyst for producing polyesters according to claim 45, wherein the organic group R is an alkyl group.

47. The catalyst for producing polyesters according to claim 45, wherein the compound represented by general formula 7 or 8 is a tetraalkoxytitanium compound or a titanium chelate compound.

48. The catalyst for producing polyesters according to claim 45, wherein the ligand is at least one compound selected from the group consisting of metal-free phthalocyanine, indanthrone, anthraquinone, and methine.

49. A polyester resin composition produced in the presence of the catalyst for producing polyesters according to claim 45.

50. A polyester film comprising the polyester resin composition according to claim 49.

51. A laminated polyester film comprising a plurality of layers, at least one of which comprises the polyester resin composition according to claim 49.

52. A magnetic recording medium, comprising the laminated

polyester film according to claim 51.